Results presented in Figure 3 demonstrate that the participating groups' motivation is significantly higher compared to the non-participating group. For example, the participating group outperforms the non-participating group across all of the coursework components including assignments, quizzes, and exams.

Results from the survey show that 84% of students strongly agree that the use of hardware prototyping platforms has increased their interest in engineering or computer science. In addition, 93% of the students that participated in this post-semester survey either strongly agree or agree that the use of hardware prototyping platforms helped create a challenging and exciting atmosphere in and outside classroom.

Regarding Figure 2, which shows the answers to the first question in the IS, more than half of the students attending the course signed up for it because they were interested in learning and felt curious. Appealing to their motivation to learn and their curiosity was our intention when considering how to bring HPC to students, and we believe "hands-on" experience is crucial, as stated by other authors [26], [27].

HPC interest has increased among students.

Figure 3 evidences that all the students afterward believe that HPC has impact on their day to day (only half of the students had that feeling before the course).

86.5% of students found that the use of Raspberry Pi mini-computer in the lab as a project increased their interest in Problem-Solving course, CS150 or CS250.

Positive and negative answers count for Survey Question 4 show that over 75% of students found that the use of real-world Raspberry Pi projects in a dynamic classroom help removing their fear of Computer Science major if they had any.

Raspberry Pi mini-computer related program as a homework project motivated them to finish the homework.

T able 2 presents similar data for items about the feeling stude ts reported concern ing pursuing fu ture studies. T e majority of the p articipants responded with agr ement for each of the items (i.e., low-level progr amming, game programming, and independe nt studies) . In all cases, the majority of the survey participants have reacted positivel y to the use of th e Raspberry Pi.

The incorporation of Raspberry Pis into this level of course has added to student engagement and enthusiasm and produced exciting results—both in terms of students' technical development as well as their development as participants in the wider computing community.

The overall mean for the fifth question responses was 4.19, and
40 of the 48 total respondents answered either a "4" or "5". This suggests to us that the vast majority of the participants felt the

Raspberry Pi 3 SBC was a very positive factor in motivating them to learn more about parallel computing.

The survey's results showed that the students mostly satisfied with the use of the Intel® Galileo board and able to complete the laboratory exercises and course projects (Table 2).

Students took advantage of the possibility to see contributions uploaded by others. They learned from each other, as evidenced by their clip reshooting after watching clips by others (seen from Bootlegger log data, confirmed by interviews and survey).

The initial fright of being set the task caused panic and confusion, which fits Dewey's [20] definition of a problem perfectly and although the trainees were able to reinterpret their goals, it took coaching for them to do so.

This may or may not have been developed in the trainee's degree course; however, the evidence here shows that they needed coaching through the process and required human support to overcome their initial shock.

There is a difference in emphasis on
parallel programming and soft skills between the first and second parts of the semester.

Students growth on soft and parallel
programming skills did increase when greater emphasis is placed on parallel programming and soft skills.